

REMARKS

In response to the Final Office Action mailed July 6, 2007, Applicants respectfully request reconsideration. Each of the issues raised in the Office Action is addressed herein.

Claims 1-7 are pending in this application, of which claims 1 and 5 are independent claims. In this amendment, claims 1-3, and 5-7 have been amended. No claims have been added or canceled. No new matter has been added. The application as now presented is believed to be in allowable condition.

Rejections Under 35 U.S.C. §102

Claims 1-7 were rejected under 35 U.S.C. 102(b) as being allegedly anticipated by U.S. Patent No. 6,070,210 (hereafter, "Cheon"). Applicants respectfully traverse these rejections to the extent that they are maintained over the claims as amended herein.

As amended, independent claim 1 recites a method comprising transmitting first digital messages to an analysis tool from a monitoring circuit integrated with a microprocessor. The first digital messages are representative of first specific events which depend on execution of an instruction sequence by the microprocessor. The method further comprises detecting, with a request circuit, at least one second specific event independent from the execution of the instruction sequence by the microprocessor, and transmitting to the monitoring circuit, when the at least one second specific event is detected, a characteristic data signal associated with said at least one second specific event. The method further comprises storing the characteristic data signal in the monitoring circuit and, if resource management conditions are fulfilled, transmitting an acknowledgement signal to the request circuit. The method further comprises transmitting at least one second digital message representative of the stored characteristic data signal to the analysis tool, and processing the first digital messages and the at least one second digital message via the analysis tool to analyze operation of the microprocessor and the at least one second specific event.

Claim 5 is an independent apparatus claim that closely tracks the language of independent method claim 1. As amended, claim 1 recites an apparatus comprising a microprocessor, a memory integrated with the microprocessor, an analysis tool, and a monitoring circuit for transmitting first digital messages to the analysis tool. The first digital messages are

representative of first specific events which depend on execution of an instruction sequence by the microprocessor. The apparatus further comprises a request circuit for detecting at least one second specific event independent from the execution of the instruction sequence by the microprocessor. The request circuit transmits to the monitoring circuit, when the at least one second specific event is detected, a request signal and a characteristic data signal associated with said at least one second specific event. The monitoring circuit stores the characteristic data signal, transmits to the request circuit an acknowledgement signal when the characteristic data signal is stored, and transmits to the analysis tool at least one second digital message representative of said stored characteristic data signal. The analysis tool processes the first digital messages and the at least one second digital message to analyze operation of the microprocessor and the at least one second specific event.

Cheon fails to disclose or suggest all of the elements of independent claims 1 and 5, respectively. For example, Cheon fails to disclose or suggest processing first digital messages and at least one second digital message, via an analysis tool, to analyze operation of a microprocessor and at least one second specific event.

Preliminarily, it is noteworthy the Applicants' disclosure is directed generally to methods and apparatus for testing/monitoring operation of a microprocessor (e.g., execution of instructions by the microprocessor), as well as monitoring other events that may not be directly related to the operation of the microprocessor (but nonetheless germane to a system in which the microprocessor is employed) (See specification, page 2, line 26 through page 3, line 11).

Cheon's disclosure is wholly unrelated to the foregoing; instead, Cheon is directed specifically to direct memory access (DMA) devices. In particular, Cheon discloses a direct memory access (DMA) transmission system, including a DMA device coupled to a microprocessor, a memory, a SCSI controller, and a mode selecting apparatus for handling both burst mode and single mode operation of the DMA device (Cheon, Col 2, lines 30-49; Fig. 2). Nowhere in the reference does Cheon disclose or suggest in any manner an analysis tool for analyzing operation of the microprocessor or any other elements of Cheon's DMA transmission system.

In connection with claim 1, the Office Action contends that Cheon allegedly discloses an analysis tool, referring to the memory 110 shown in Cheon's Fig. 2 (See Office Action, page 3, lines 6-7). The Office Action further indicates on page 5, in paragraph 8, that "the term 'analysis

tool’ merely requires a tool which can be used for analysis...therefore, a memory is considered to be an analysis tool.” Applicants respectfully disagree.

First, Applicants submit that it would be readily appreciated by one of skill in the art that a conventional memory is merely a storage device without any independent processing capability; as such, a memory *per se* is incapable of “analysis.” Certainly, information or data stored in the memory may be retrieved and processed/analyzed by another device (e.g., a microprocessor); but again, a conventional memory itself cannot analyze information. Accordingly, it is disingenuous to point to Cheon’s memory 110 as disclosing the analysis tool recited in claims 1 and 5. More specifically, Cheon clearly fails to disclose or suggest processing first digital messages and at least one second digital message, via an analysis tool, to analyze operation of a microprocessor and at least one second specific event.

Second, it is noteworthy that claim 5 recites both a memory and an analysis tool. Applicants respectfully point out that it is improper to rely on only a single object or teaching described in a reference as purportedly showing multiple different limitations of a claim. In particular, although an Examiner is entitled to give claim limitations their broadest reasonable interpretation, such an interpretation must be consistent with the specification (MPEP 2111.01). As described in Applicants’ specification and shown in the figures, a memory 14 and an analysis tool 24 are different elements (See specification, page 1, lines 4-18; Figs. 1 and 2). Accordingly, any interpretation of these elements as allegedly being disclosed by a single feature of Cheon is not consistent with the specification, because it ignores the differences between these terms and the relationship that these elements have to one another.

For at least the foregoing reasons, claims 1 and 5 patentably distinguish over Cheon and are in condition for allowance. Therefore, the rejections of claims 1 and 5 under 35 U.S.C. 102(b) as being anticipated by Cheon should be withdrawn.

Claims 2-4 and 6-7 depend from one of claims 1 and 5 and are allowable based at least upon their dependency.

CONCLUSION

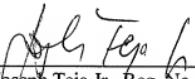
A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: September 6, 2007

Respectfully submitted,

By:



Joseph Teja Jr., Reg. No. 45,157
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
Telephone: (617) 646-8000